

FIG. 1

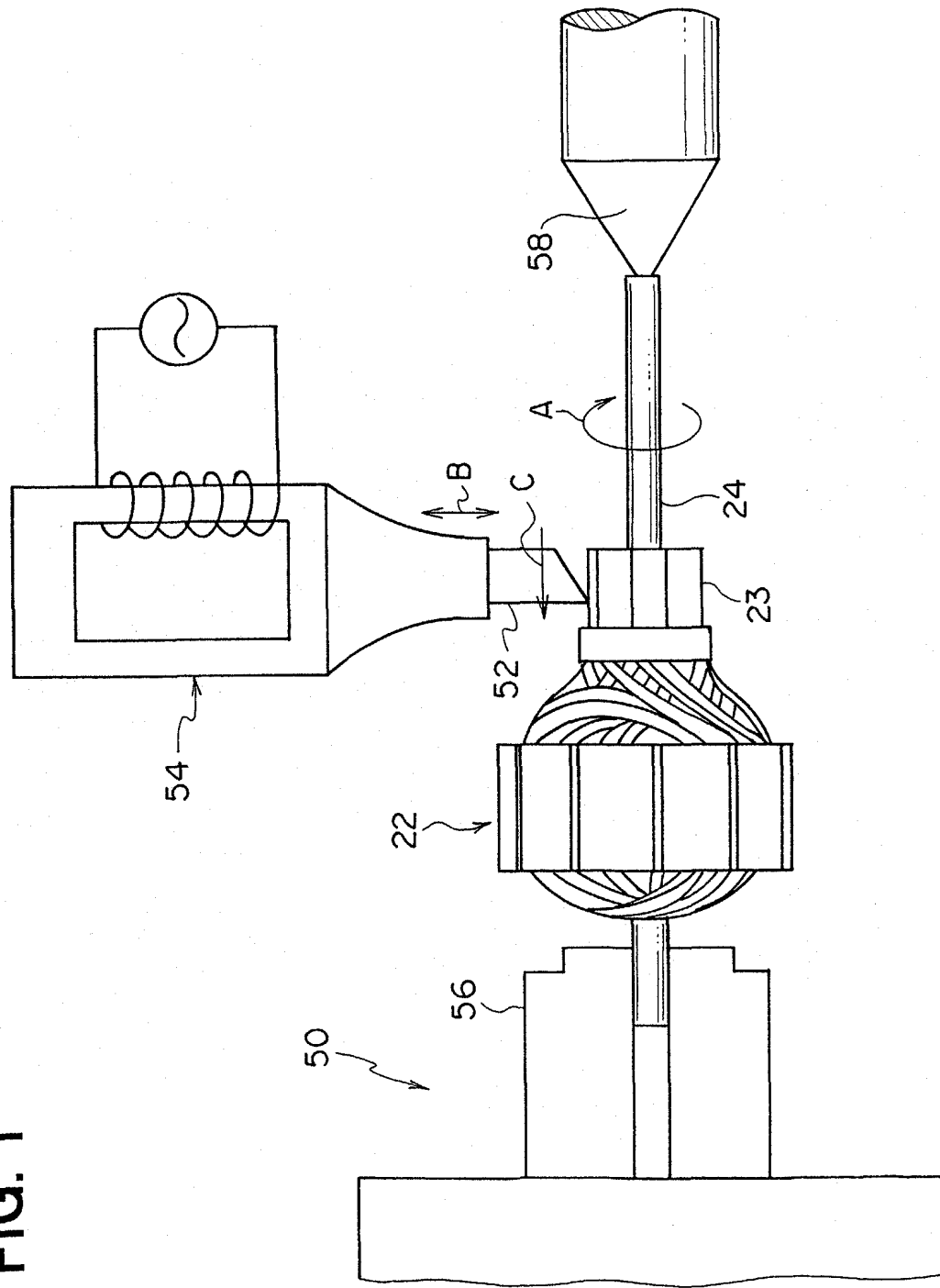


FIG. 2

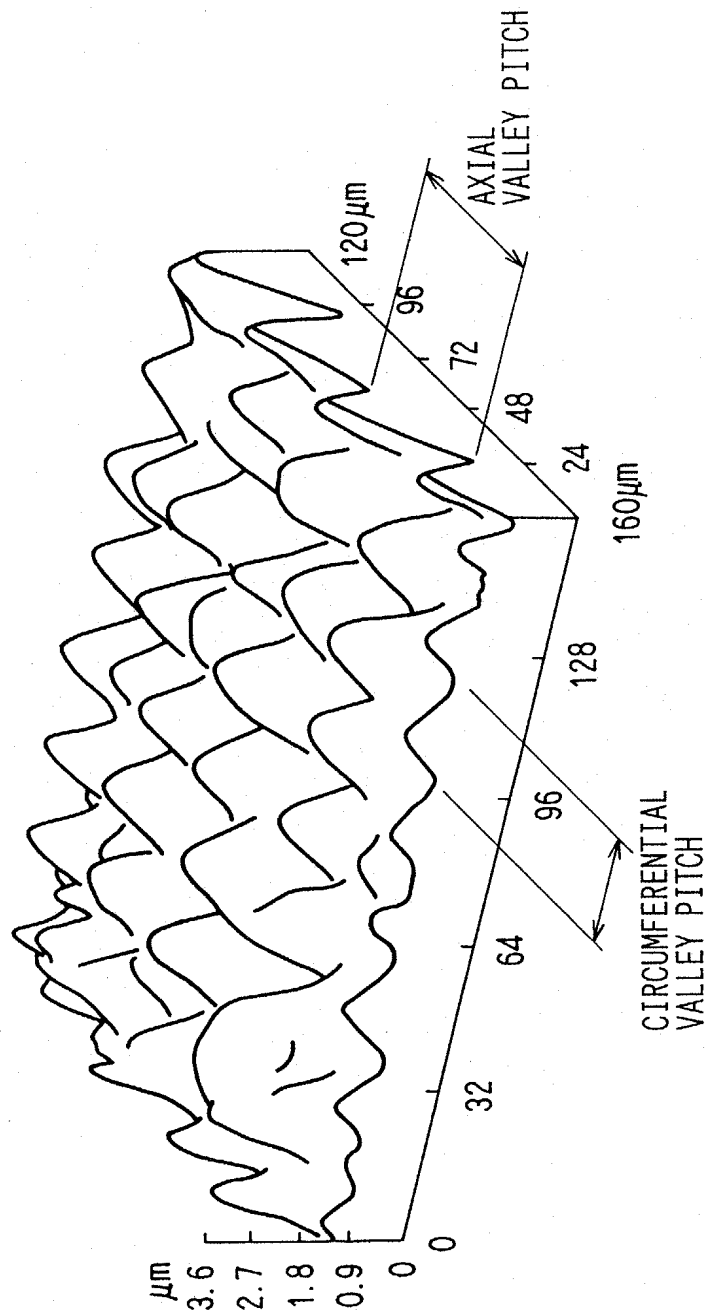


FIG. 3

EFFECTS OF SURFACE ROUGHNESS OF COMMUTATOR

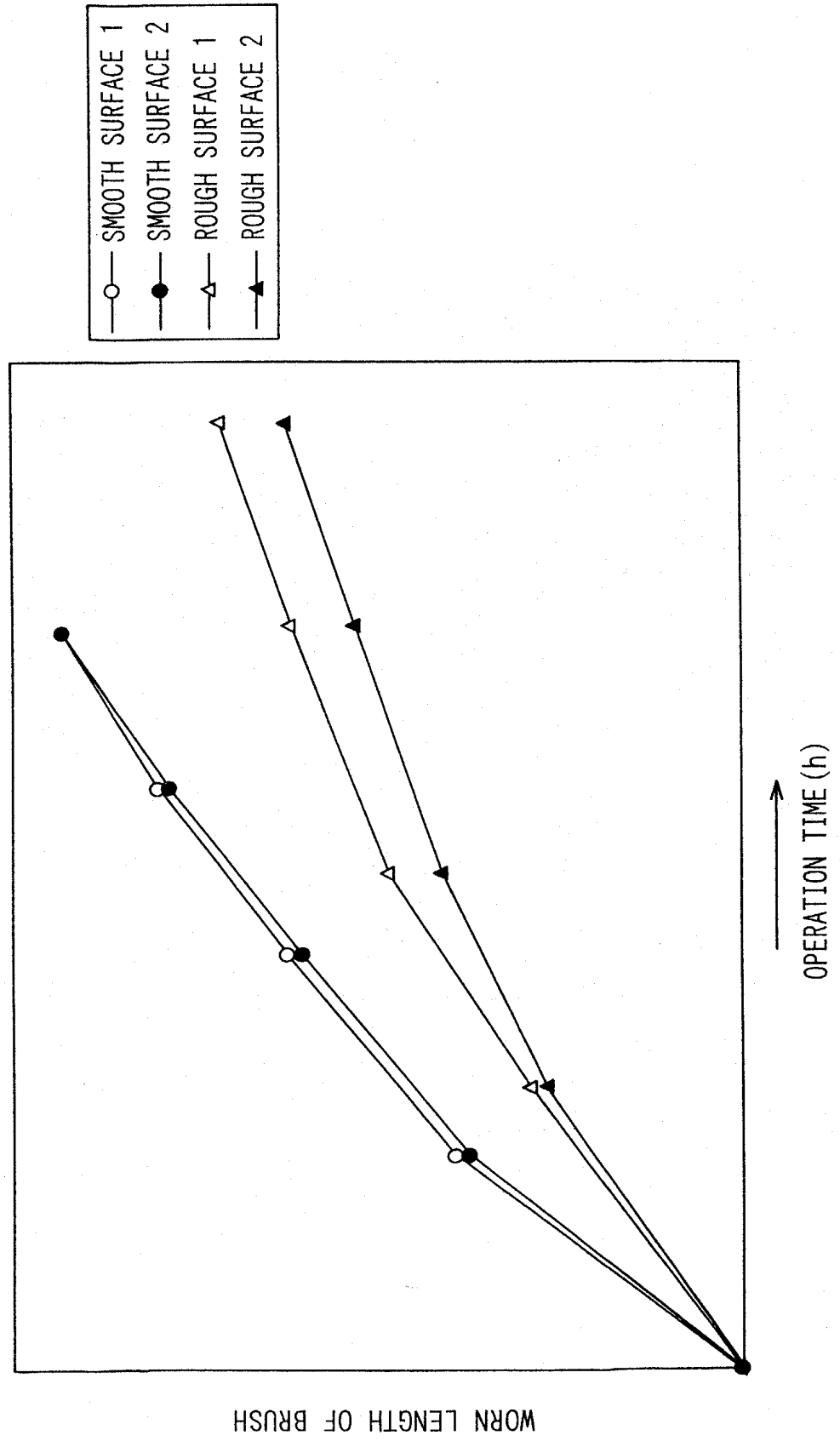


FIG. 4A

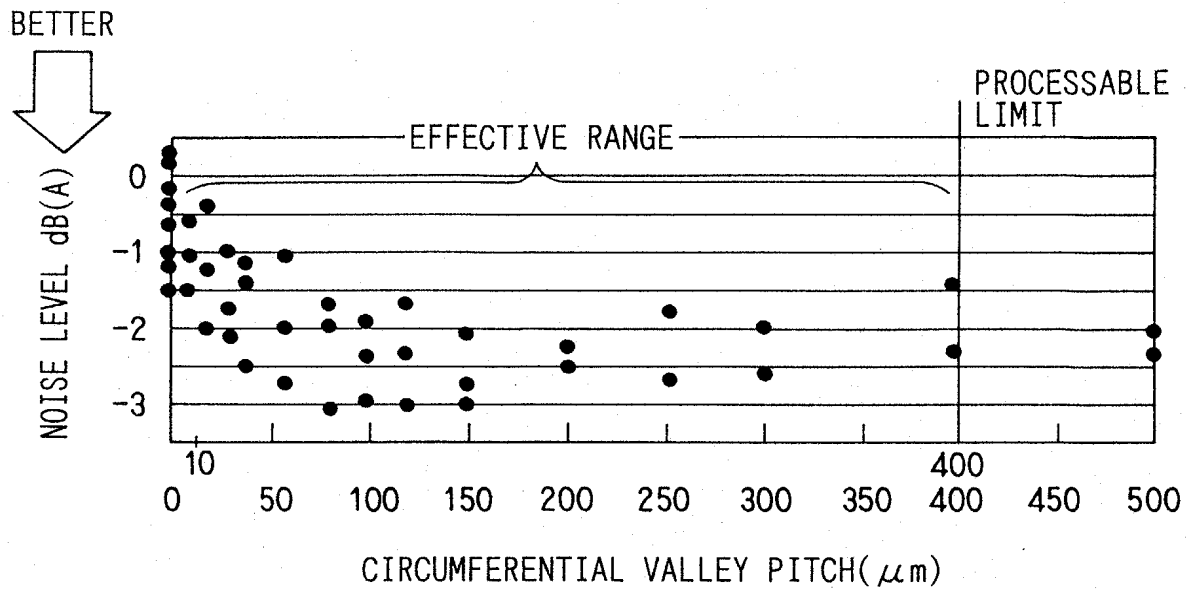


FIG. 4B

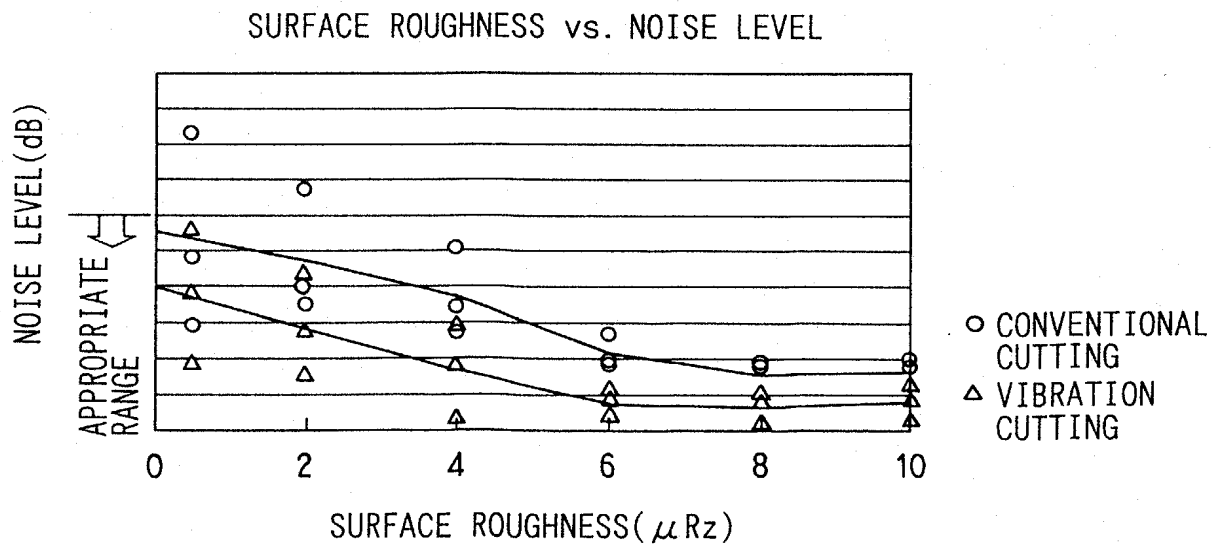
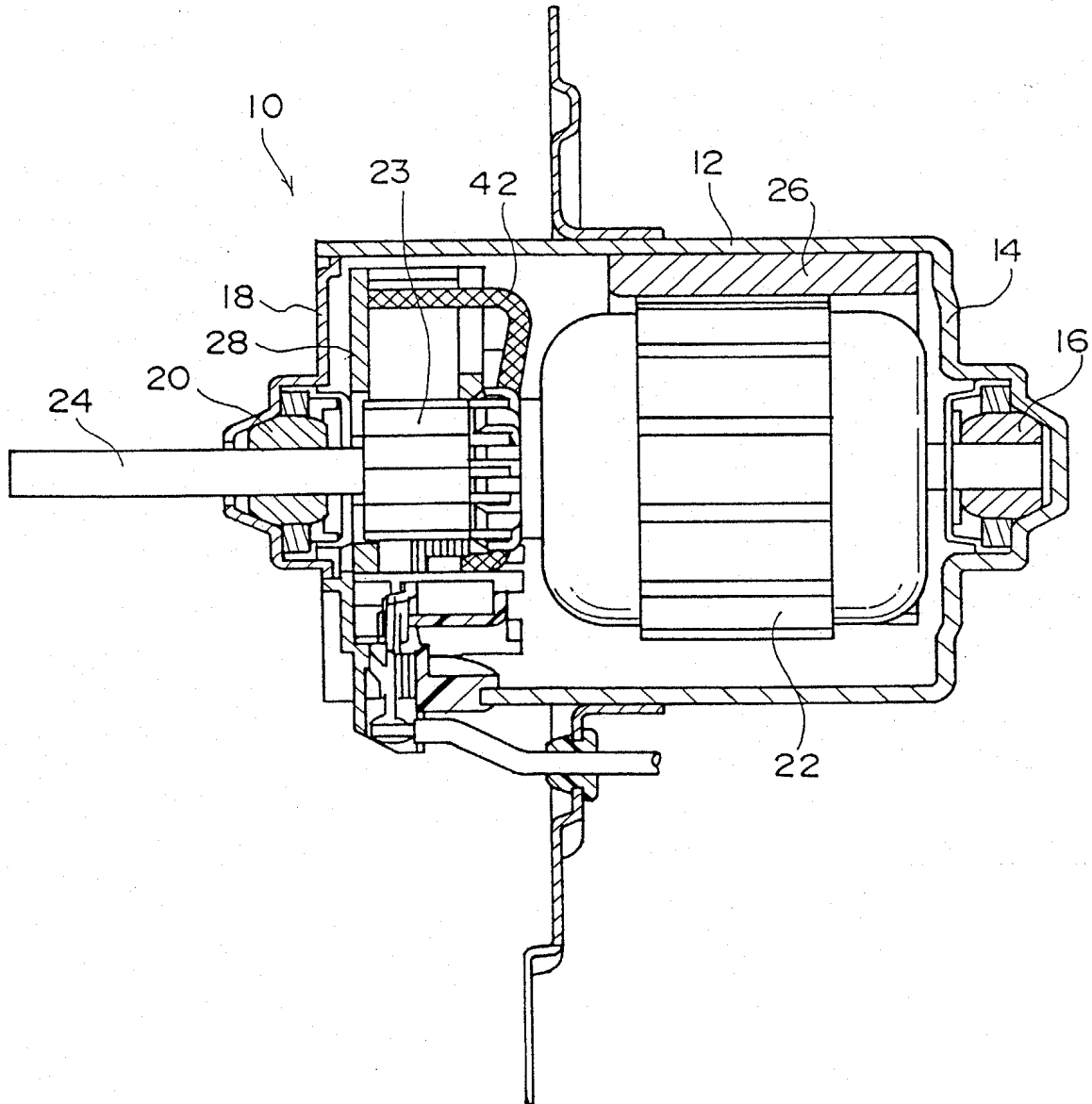


FIG. 5



0991927 4400
FOGAT 22616660

FIG. 6

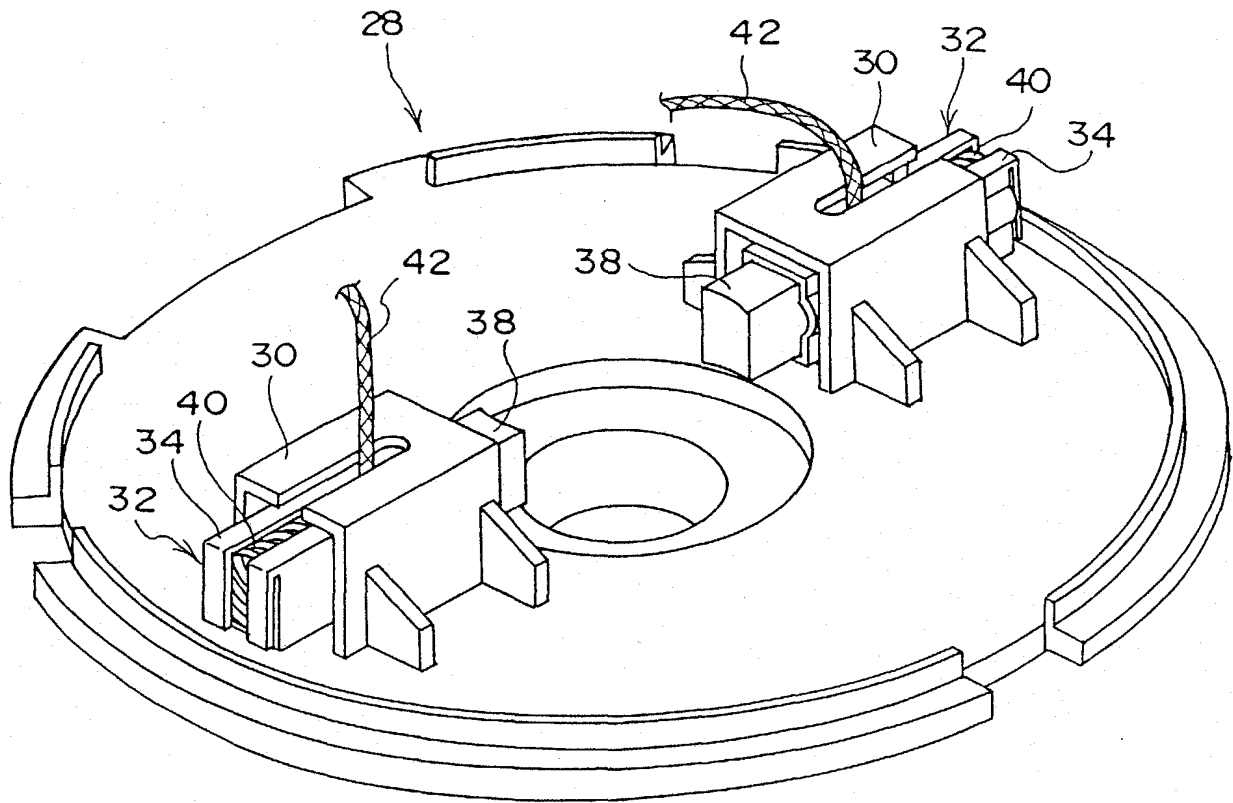


FIG. 7

